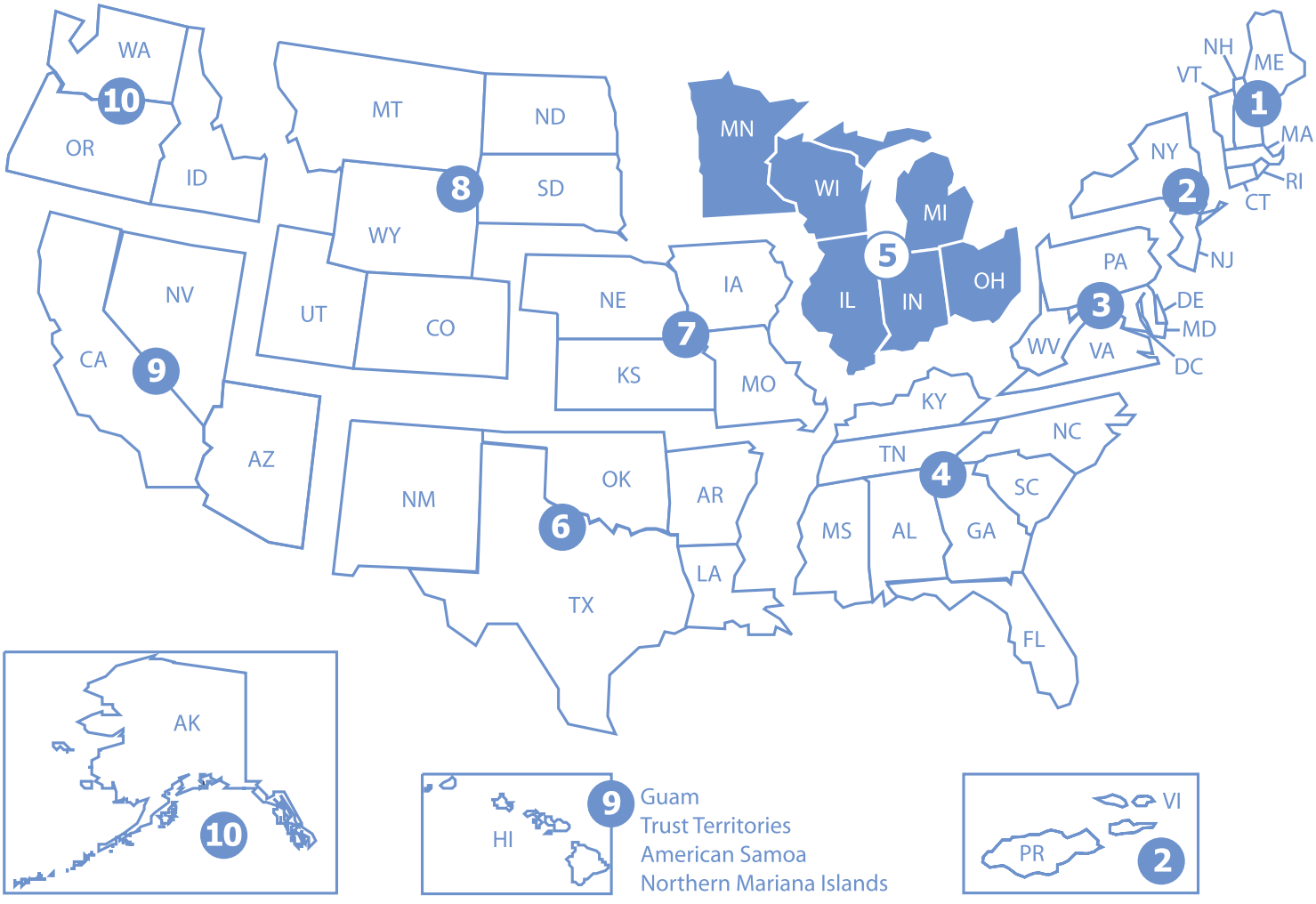
United States
Environmental Protection
Agency

1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

September 2023

Office of Land and Emergency Management

Support Document for the Revised National Priorities List Final Rule – Federated Metals Corp Whiting



Support Document for the Revised National Priorities List Final Rule

Federated Metals Corp Whiting

September 2023

Site Assessment and Remedy Decisions Branch
Office of Superfund Remediation and Technology Innovation
Office of Land and Emergency Management
U.S. Environmental Protection Agency
Washington, DC 20460

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Executive Summary

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original National Priorities List (NPL) was promulgated on September 8, 1983 (48 FR 40658). CERCLA requires that EPA update the list at least annually.

This document provides responses to public comments received on the Federated Metals Corp Whiting site, proposed on March 29, 2023 (88 FR 18499). This site is being added to the NPL based on an evaluation under EPA's Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in September 2023.

Introduction

This document explains the rationale for adding the Federated Metals Corp Whiting site in Hammond, Indiana, to the National Priorities List (NPL) of uncontrolled hazardous waste sites and provides responses to public comments received on this site listing proposal. The EPA proposed this site to the NPL on March 29, 2023 (88 FR 18499). This site is being added to the NPL based on an evaluation under the Hazard Ranking System (HRS) in a final rule published in the *Federal Register* in September 2023.

Background of the NPL

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Sections 9601 *et seq*. in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by the Superfund Amendments and Reauthorization Act (SARA), Public Law No. 99-499, stat., 1613 *et seq.* To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include:

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, taking into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101). Remedial action is generally long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS. EPA promulgated the HRS as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991. On January 9, 2017, EPA promulgated a further revision to the HRS that added a component for evaluating the threats posed by the intrusion of subsurface contamination into regularly occupied structures. These changes are consistent with, and comply with, the statutory requirements of SARA.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites, as suggested by CERCLA. The NPL has been expanded several times since then, most recently on March 29, 2023 (88 FR 18435). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was on March 29, 2023 (88 FR 18499).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]).

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The NPL, therefore, is primarily an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principal mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories are:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (e.g., toxicity and waste quantity); and
- targets (e.g., people or sensitive environments) affected by the release.

Under the HRS, four pathways can be scored for one or more components and threats as identified below:

- Ground Water Migration (S_{gw})
  - population

- Surface Water Migration (S_{sw})
  The following threats are evaluated for two separate migration components, overland/flood migration and ground water to surface water.
  - drinking water
  - human food chain
  - sensitive environments

- Soil Exposure and Subsurface Intrusion (S_{sessi})
  - Soil Exposure Component:
    - resident population
    - nearby population
  - Subsurface Intrusion Component
    - population

- Air Migration (S_a)
  - population

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100**:**

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_{sessi}^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

There are two mechanisms other than the HRS by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score. The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets the following three requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.

Organization of this Document

The following section contains EPA responses to site-specific public comments received on the proposal of the Federated Metals Corp Whiting site on March 29, 2023 (88 FR 18499). The site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses to each comment. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
AOC	Area of Observed Contamination
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
CAMU	Corrective Action Management Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq*., also known as Superfund
CFR	Code of Federal Regulations
CIP	Community Involvement Plan
CLP	EPA Contract Laboratory Program
CRQL	Contract-required quantitation limit
DL	Detection Limit
EPA	U.S. Environmental Protection Agency
ESI	Expanded Site Inspection
FR	Federal Register
FS	Feasibility Study
HRS	Hazard Ranking System, Appendix A of the NCP
HRS score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
IDEM	Indiana Department of Environmental Management
µg/L	Microgram per liter
mg/kg	Milligram per kilogram
MRL	Minimum reporting limit
MW	Monitoring Well
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List
O&M	Operations and Maintenance
OLEM	EPA Office of Land and Emergency Management

PA	Preliminary Assessment
PPE	Probable Point of Entry
PRP	Potentially responsible party
RCRA	Resource Conservation and Recovery Act
RfD	Reference Dose
RI	Remedial investigation
RI/FS	Remedial investigation/feasibility study
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SQL	Sample quantitation limit
SI	Site Inspection
SWMU	Solid Waste Management Unit
TDL	Target Distance Limit
USGS	United States Geological Survey

1. List of Commenters and Correspondence

EPA-HQ-OLEM-2023-0050-0004	Correspondence, dated March 29, 2022, submitted by Brian C. Rockensuess, Commissioner, Indiana Department of Environmental Management.
EPA-HQ-OLEM-2023-0050-0005	Comment, dated May 1, 2023, submitted by Caryn Corriere.
EPA-HQ-OLEM-2023-0050-0006	Comment, dated May 8, 2023, submitted by Matthew Markovich.
EPA-HQ-OLEM-2023-0050-0007	Comment, dated May 10, 2023, submitted by David A. Matura.
EPA-HQ-OLEM-2023-0050-0008	Comment with attachment, dated May 26, 2023, submitted by Cynthia Walter.
EPA-HQ-OLEM-2023-0050-0009	Comment with attachments, dated May 30, 2023, submitted by an anonymous commenter.
EPA-HQ-OLEM-2023-0050-0010	Comment with attachments, dated May 30, 2023, submitted by Carolyn Marsh.
EPA-HQ-OLEM-2023-0050-0011	Comment, dated May 30, 2023, submitted by Steve Spebar, Mayor, the City of Whiting.
EPA-HQ-OLEM-2023-0050-0012	Comment with attachments, dated May 30, 2023, submitted by ASARCO Multi-State Custodial Trust Trustee, by and through Le Petomane XXV, Inc.
EPA-HQ-OLEM-2023-0050-0013	Comment, dated May 16, 2023, submitted by Lori Locklear.
EPA-HQ-OLEM-2023-0050-0014	Comment, dated May 17, 2023, submitted by Rhetta Jack.
EPA-HQ-OLEM-2023-0050-0015	Comment, dated May 18, 2023, submitted by James Rachlin.
EPA-HQ-OLEM-2023-0050-0016	Comment, dated May 23, 2023, submitted by an anonymous commenter.
EPA-HQ-OLEM-2023-0050-0017	Comment, dated May 23, 2023, submitted by Theresa Carroll.
EPA-HQ-OLEM-2023-0050-0018	Comment, dated May 23, 2023, submitted by an anonymous commenter.
EPA-HQ-OLEM-2023-0050-0019	Comment, dated May 24, 2023, submitted by an anonymous commenter.
EPA-HQ-OLEM-2023-0050-0020	Comment, dated May 24, 2023, submitted by Dana Robinson.
EPA-HQ-OLEM-2023-0050-0021	Comment, dated May 24, 2023, submitted by Sean McGough.
EPA-HQ-OLEM-2023-0050-0022	Comment, dated May 25, 2023, submitted by Marilyn Ferdinand.

EPA-HQ-OLEM-2023-0050-0023	Comment, dated May 25, 2023, submitted by Patricia Walter.
EPA-HQ-OLEM-2023-0050-0024	Comment, dated May 25, 2023, submitted by Cathy Marcum.
EPA-HQ-OLEM-2023-0050-0025	Comment, dated May 26, 2023, submitted by an anonymous commenter.
EPA-HQ-OLEM-2023-0050-0026	Comment, dated May 26, 2023, submitted by Laura Mendoza.
EPA-HQ-OLEM-2023-0050-0027	Comment, dated May 28, 2023, submitted by Laura Powell.
EPA-HQ-OLEM-2023-0050-0028	Comment, dated May 29, 2023, submitted by Matthew Kalwasinski.
EPA-HQ-OLEM-2023-0050-0029	Comment, dated May 29, 2023, submitted by Ronald L. Novak, Director, Hammond Department of Environmental Management.
EPA-HQ-OLEM-2023-0050-0030	Comment, dated May 29, 2023, submitted by John Madeka.
EPA-HQ-OLEM-2023-0050-0031	Comment, dated May 29, 2023, submitted by Thomas Gaertig.
EPA-HQ-OLEM-2023-0050-0032	Comment, dated May 30, 2023, submitted by Anna Maria Flores.
EPA-HQ-OLEM-2023-0050-0033	Comment, dated May 30, 2023, submitted by Mary Skiba.
EPA-HQ-OLEM-2023-0050-0034	Comment, dated May 30, 2023, submitted by Lisa Vallee.
EPA-HQ-OLEM-2023-0050-0035	Comment, dated May 30, 2023, submitted by Kurt Samano.
EPA-HQ-OLEM-2023-0050-0036	Comment, dated May 30, 2023, submitted by Linda Kalwinski.
EPA-HQ-OLEM-2023-0050-0037	Comment, dated May 30, 2023, submitted by Mark Kalwinski.
EPA-HQ-OLEM-2023-0050-0038	Comment, dated May 30, 2023, submitted by Michael Rowden.
EPA-HQ-OLEM-2023-0041-0033*	Comment, dated May 29, 2023, submitted by April Valentine.

* This comment was erroneously received in the docket for the Lukachukai Mountains Mining District site, but it appears intended for the Federated Metals Corp Whiting docket and supported the listing of the Federated Metals Corp Whiting site.

2. Site Description

The Federated Metals Corp Whiting site (the Site) is composed of lead and arsenic-contaminated soil on residential (single- and multi-family) and non-residential (businesses, churches, parks, play areas, and vacant lots) properties where emissions from the former Federated Metals and Whiting Metals facilities contaminated the impacted properties. The Site also includes a covered waste pile containing lead and arsenic that is located on the former Federated Metals facility property.

The former Federated Metals facility covers approximately 36 acres in Whiting and Hammond, Indiana. From 1937 until 1983, the Federated Metals facility operated as a smelting, refining, recovery, and recycling facility for non-ferrous metals including copper, zinc and lead. The former facility itself is bounded to the north by the Lake George Trail, vacant land and residences; to the east by a commercial building and New York Avenue; to the south by a Resource Conservation and Recovery Act (RCRA) Corrective Action Management Unit (CAMU) and Calumet College of St. Joseph; to the west by vacant land; and to the southwest by Lake George.

The contaminated soil affects approximately 400-plus neighboring residents and 29 workers at the former facility property. The sediments within Lake George, which lies adjacent to the CAMU and the former Federated Metals facility, have also been contaminated with lead released from the Site. A habitat known to be used by the state endangered Trumpeter swan and HRS-eligible wetlands are impacted by the contaminated sediment within Lake George.

The HRS sources consist of the following three sources: the RCRA Solid Waste Management Unit (SWMU) #1 (also referred to as the CAMU) was evaluated as Source 1, in the HRS documentation record at proposal. For HRS scoring purposes, Source 1 consists of buried piles of waste material located around the western and southern portions of the former Federated Metals property. Construction activities on SWMU #1 in December 2005 added two feet of soil material and a phytoremediation cap. The HRS documentation record at proposal also evaluated contaminated soil within two areas of observed contamination (AOC A and AOC B). The Level I and Level II residential and non-residential properties north of the former facility property comprise Source 3 and AOC A. The former Federated Metals/Whiting Metals property where elevated levels of lead and arsenic are still present on the surface comprises the area of Source 2 and is AOC B. (See Figure 1 below.)

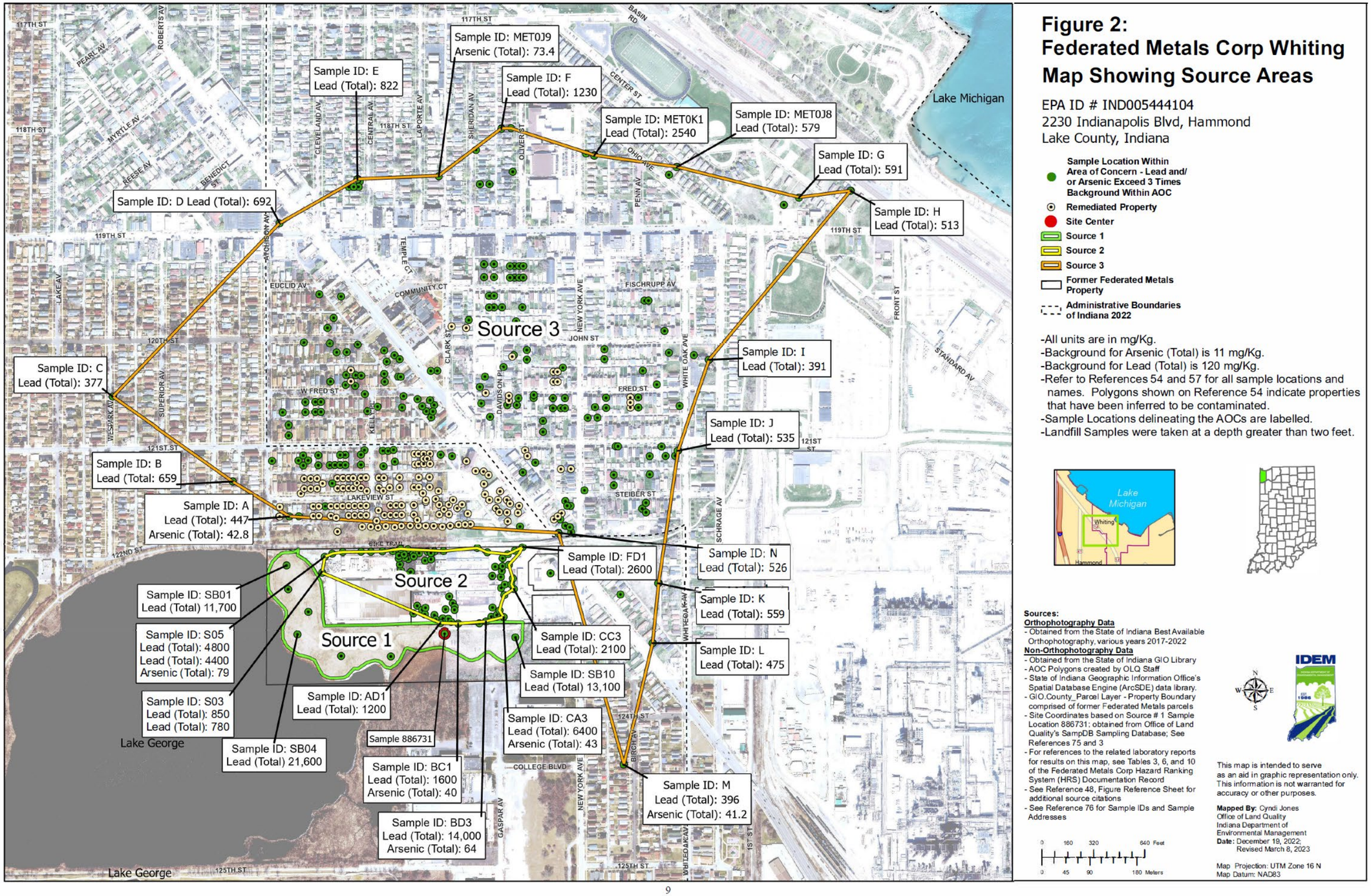

Figure 2:
Federated Metals Corp Whiting
Map Showing Source Areas

EPA ID # IND005444104
2230 Indianapolis Blvd, Hammond
Lake County, Indiana

- Sample Location Within Area of Concern - Lead and/ or Arsenic Exceed 3 Times Background Within AOC
- Remediated Property
- Site Center
- Source 1
- Source 2
- Source 3
- Former Federated Metals Property
- Administrative Boundaries of Indiana 2022

-All units are in mg/Kg.
-Background for Arsenic (Total) is 11 mg/Kg.
-Background for Lead (Total) is 120 mg/Kg.
-Refer to References 54 and 57 for all sample locations and names. Polygons shown on Reference 54 indicate properties that have been inferred to be contaminated.
-Sample Locations delineating the AOCs are labelled.
-Landfill Samples were taken at a depth greater than two feet.

Sources:
Orthophotography Data
- Obtained from the State of Indiana Best Available Orthophotography, various years 2017-2022

Non-Orthophotography Data
- Obtained from the State of Indiana GIO Library
- AOC Polygons created by OLQ Staff
- State of Indiana Geographic Information Office's Spatial Database Engine (ArcSDE) data library.
- GIO.County_Parcel Layer - Property Boundary comprised of former Federated Metals parcels
- Site Coordinates based on Source # 1 Sample Location 886731; obtained from Office of Land Quality's SampDB Sampling Database; See References 75 and 3
- For references to the related laboratory reports for results on this map, see Tables 3, 6, and 10 of the Federated Metals Corp Hazard Ranking System (HRS) Documentation Record
- See Reference 48, Figure Reference Sheet for additional source citations
- See Reference 76 for Sample IDs and Sample Addresses

0 160 320 640 Feet
0 45 90 180 Meters

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: Cyndi Jones
Office of Land Quality
Indiana Department of Environmental Management
Date: December 19, 2022;
Revised March 8, 2023

Map Projection: UTM Zone 16 N
Map Datum: NAD83

Figure 1 – Map showing the source areas at the Federated Metals Corp Whiting site (note: this is Figure 2 of the HRS documentation record at proposal for the Site).

3. Summary of Comments

The Mayor of the City of Whiting, the Director of the Hammond Department of Environmental Management, and 32 private citizens expressed support for or did not oppose the proposed listing of the Site on the NPL. These commenters expressed concerns for, among other things, public human health, the impact on wildlife, the extent and magnitude of the contamination, the impact on property values, and financial assistance to address the contamination. An anonymous commenter expressed discontentment on learning of the contamination associated with the Site.

The ASARCO Multi-State Environmental Custodial Trust (herein referred to as the Trust) submitted comments questioning the appropriateness of the proposed listing. The Trust has been carrying out response actions at the Site with EPA oversight. The Trust commented that additional supporting information for the Hazard Ranking System (HRS) package should be considered for inclusion. It emphasized that while studies conducted by the Trust through 2016 were referenced in the HRS documentation record at proposal for the Site, key recent studies were not referenced. Moreover, the Trust indicated that the HRS documentation record at proposal misstates certain features of the Trust Property (i.e., Source 1).

The Trust commented that the HRS documentation record at proposal did not accurately describe the current conditions of Source 1. Specifically, it commented that Source 1 is covered with a 10-acre engineered cap (containing a stormwater run on and runoff control system) and is being maintained by the Trust via a US EPA approved O&M plan. The Trust also submitted comments related to whether actions it has taken have mitigated ongoing risk to the environment from Source 1.

The Trust submitted comments questioning aspects of the HRS evaluation. It commented that the description of Source 1 characteristics related to containment in the HRS documentation record at proposal do not fully acknowledge aspects of the engineered cap constructed in 2005. The Trust asserted that:

- The O&M plan details the presence and management of stormwater run on and runoff controls of Source 1 via the 10-acre engineered cap.
- The 10-acre engineered cap on Source 1 effectively mitigates aqueous infiltration and pollutant loading to Lake George.
- The September 2019 Final Post-Closure Groundwater Sampling and Analysis Report (included as Attachment 2 of the Trust's comment letter), and the 2022 Transducer Study (included as Attachment 3 of the Trust's comment letter) show that groundwater beneath the cap generally flows away from Lake George further mitigating the risk posed by the Site.

In commenting on the overland flow path from Source 1 and probable points of entry, the Trust indicated that the HRS documentation record at proposal misstates features on Source 1 and notes that excess stormwater on the engineered cap is directed to two drainage swales that discharge to Lake George and to the Sedge Meadow. Finally, the Trust stated that the groundwater beneath Source 1 has been studied for interactions both with the shoreline of the Trust Property and with surface water in Lake George, and these studies indicated the lack of a "significant threat" to Lake George.

3.1 Support for Listing and Other Non-opposition Comments

The EPA received 31 comments from 31 commenters that either provided support for the proposed listing or generally did not oppose the proposed NPL designation of the Site. Those commenters in support of listing or not opposed to listing the Site include the State of Indiana Department of Environmental Management (IDEM), the City of Whiting, the Hammond Department of Environmental Management, and a number of private citizens from the area.

One comment submittal, EPA-HQ-OLEM-2023-0041-0033, was erroneously submitted to the Lukachukai Mountains Mining District docket but expressed support for adding the Federated Metals Corp Whiting site to the NPL.

3.1.1 General Support

Comment: IDEM supported EPA's decision to add the Site to the NPL. IDEM stated that NPL designation would allow for timely investigation into the contamination and identification of remedial measures at the Site. IDEM requested that the EPA assign a Remedial Project Manager or On-Scene Coordination to begin the Superfund process. The City of Whiting supported the listing, indicating action is needed to reduce the threat from lead contamination to the health of residents and children in the community.

The City of Whiting commented that the operations at the former Federated Metals facility in Hammond appear to have impacted homeowners in Whiting, Indiana to a greater extent than Hammond homeowners except for those adjacent to the plant. They stated that testing had not identified a clear or consistent pattern, resulting in an unknown extent of the contamination. The City of Whiting asserted that it would provide support for the addition of the Site to the NPL if NPL designation is needed to fund additional investigation of the contamination in Whiting.

Multiple commenters cited various specific reasons for their support of placing the Site on the NPL; these included the following:

- The need for remediation of the community.
- The need for remediation of the environment and local ecosystem.
- The lack of present facility operators to address the contamination.
- Concerns about soil contamination in the community including on residential properties.
- Concerns about the negative impacts from the Site.
- Concerns regarding property values.
- Concerns over funding for remediation.

In addition, one commenter asserted that if the Site is not listed:

- Drinking water for Chicago would remain threatened by contamination from the lake via physical routes and biological transport.
- Lake George and its wetlands will remain impacted.
- Economic impacts will occur.

Response: The EPA has added the Federated Metals Corp Whiting site to the NPL. Listing makes a site eligible for remedial action funding under CERCLA, and the EPA will examine the Site to determine what response, if any, is appropriate. Actual funding may not necessarily be undertaken in the precise order of HRS scores, however, and upon more detailed investigation may not be necessary in some cases. The EPA will determine the need for using Superfund funding for remedial activities on a site-by-site basis, taking into account the NPL ranking, State priorities, further site investigation, other response alternatives, and other factors as appropriate.

3.1.2 Support with Requests for Further Actions

Comment: As summarized below, many commenters in support of NPL listing also provided comments and requests related to the EPA's proposed NPL designation of the Site.

Several commenters provided comments discussing future cleanup actions and/or risk from the contamination:

- Five commenters noted that the Site warrants involvement from the EPA to protect human health, wildlife, and/or the environment.
- Four commenters expressed support for cleaning up the city to ensure better public health outcomes and economic benefits.
- Three commenters requested that opportunities for public input and community involvement be made available during the remedial process.
- Two commenters expressed concern regarding the contamination at the former facility property.
- One commenter expressed concern over possible contamination in the area due to the presence of "glitter" on the ground.
- One commenter requested that the CAMU be assessed for interfaces with Lake George via groundwater or stormwater runoff.
- Five commenters expressed concern over deceased wildlife at Lake George and/or requested additional information regarding deceased wildlife seen at Lake George.
- One commenter requested the Site be made into a U.S. National Wildlife Refuge.
- One commenter requested that a bike trail and the Lost Marsh Golf Course be evaluated.
- One commenter requested additional information regarding whether Lake George and its wetlands were impacted.
- One commenter inquired whether a risk is posed by recreational activities and consumption fishing at Lake George.
- One commenter provided a suggested strategy to address contamination in the North Basin and restore the environment at the North Basin.
- The City of Whiting asserted that the area should be fully investigated and efficiently remediated as opposed to being incompletely addressed.
- One commenter commented on the timeliness of past and future actions to address contamination, expressing concern over the time it has taken to address lead contamination in the area.

Multiple commenters submitted comments related to aspects of funding for remediation, liability for the contamination, and/or economic impacts associated with the Site:

- One commenter requested transparency about the funding for and timing of cleanup.
- One commenter requested stronger regulations to hold companies accountable for impacts to the environment.
- One commenter asserted that potentially responsible parties (PRPs) should contribute funding for remediation instead of taxpayers.
- One commenter requested information regarding whether a specific company would be investigated and held liable for alleged polyethylene contamination in Lake George, whether open discussion of the specific company would continue as part of public discussion associated with the Federated Metals site, whether a possible ongoing lawsuit related to the specific company would impact a Superfund cleanup of the Site, and whether legal action would be pursued against the specific company.
- The City of Whiting requested a complete response that is cost-effective.
- The City of Whiting indicated that many homes in Whiting have a positive market value (in spite of prior stigma associated with contamination) and requested that a complete response occur to avoid homes with decreased property values and stigma for an extended period of time.

Two commenters provided requests related to the boundaries of the Site. The City of Whiting and an additional commenter requested that the boundaries of the Site be determined.

Response: Specific approaches to remediation are not considered at the listing stage of the Superfund process. Consistent with CERCLA, the EPA has in place a procedure for identifying sites where releases of substances addressed under CERCLA have occurred or may occur, placing such sites on the NPL, evaluating the nature and

extent of the threats at such sites, responding to those threats, and deleting sites from the NPL. The purpose of the initial two steps is to develop the NPL, which identifies for the States and the public those sites that appear to warrant remedial action (56 FR 35842, July 29, 1991). The evaluation or remedial investigation/feasibility study (RI/FS) phase involves on-site testing to assess the nature and extent of the public health and environmental risks associated with the site and to determine what remedial actions, if any, may be appropriate. After a period of public comment, the EPA responds to those threats by issuing a Record of Decision which selects the most appropriate alternative. The selected remedy is implemented during the remedial design/remedial action phase. Finally, the site may be deleted from the NPL when the EPA determines that no further response is appropriate.

As part of the Superfund process, the Superfund program offers numerous opportunities for public participation at NPL sites. The EPA Regional Office develops a Community Involvement Plan (CIP) before RI/FS field work begins. A CIP is a site-specific strategy to enable meaningful community involvement throughout the Superfund cleanup process. In developing a CIP, Regional staff interview State and local officials and interested citizens to learn about citizen concerns, site conditions, and local history. This information is used to formulate a schedule of activities designed to keep citizens apprised and to keep the EPA aware of community concerns. Typical community relations activities include:

- Public meetings at which the EPA presents a summary of technical information regarding the Site and citizens can ask questions or comment.
- Small, informal public sessions at which EPA representatives are available to citizens.
- Development and distribution of fact sheets to keep citizens up to date on site activities.

For each site, an "information repository" is established, usually in a library or town hall and/or on an EPA web site, containing reports, studies, fact sheets, and other documents containing information about the Site. The EPA Regional Office continually updates the repository and must ensure that the facility housing the repository has copying capabilities.

In addition to meeting Federal requirements, the EPA makes every attempt to ensure that community involvement is a continuing activity designed to meet the specific needs of the community. Anyone wanting information on a specific site should contact the Community Involvement Coordinator in the appropriate EPA Regional Office. The EPA maintains a site-specific progress profile web-page[1], which contains additional site information for the community and general public. Interested parties can access additional site-specific information on this web-page.

Regarding the risk posed by the Site to human health and/or the environment, including risk associated with Lake George as well as risk associated with soil contamination, the EPA considers that there is a threat to human health and/or the environment posed by the contamination at the Site and that this threat warrants further investigation before determining the site-specific risk. The HRS site score for this site above 28.50 represents the EPA's determination that the Site poses a risk relative to other sites evaluated under the HRS and warrants further investigation. Please see section 3.5, Risk to Human Health or the Environment, of this support document for additional discussion of relative risk.

Regarding funding for response actions, funding-related issues are not considered when determining if a site qualifies for the NPL, and these issues do not need to be addressed prior to promulgation of the Site to the NPL. The EPA's actions to evaluate the Site using the HRS and list the Site are consistent with the requirements of CERCLA and SARA, and the statutory purpose of the NPL, which is to inform the public of possible threats and identify those sites which appear to warrant further investigation and/or remediation. The remedy selection—if any is found necessary—and any associated funding is a step carried out at a later stage of the Superfund process.

[1] The Federated Metals Corp Whiting site progress profile is available online at the following location: https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0501275&msspp=med

Insomuch as these comments pertain to the assignment of liability, liability is not considered in evaluating a site under the HRS, and listing does not assign any liability to any person. Please see also section 3.3, Liability, of this support document for additional discussion regarding liability and placing a site on the NPL.

Regarding commenters that would like other areas to be specifically evaluated or otherwise commented on the extent of the Site, the boundaries of the Site are not established at listing. Until the site investigation process has been completed and a remedial action (if any) selected, the EPA can neither estimate the extent of contamination at the NPL site, nor describe the ultimate dimensions of the site. Further investigation during a different step in the Superfund process will characterize the contamination more fully as needed.

Regarding comments that expressed concern over property values and/or potential stigma associated with an NPL designation, the EPA notes that there are both costs and benefits that can be associated with listing a site. Among the benefits are increased health and environmental protection as a result of increased public awareness of potential hazards. As a result of the additional CERCLA remedies, there will be lower human exposure to high-risk chemicals, and access to higher quality surface water, groundwater, soil, and air. Therefore, it is possible that any perceived or actual negative fluctuations in property values or development opportunities that may result from contamination may also be countered by positive fluctuations when a CERCLA investigation and any necessary cleanup are completed. Please see also section 3.6, Impact of Contamination/Stigma of Listing, of this support document for additional discussion of possible negative impacts associated with listing.

3.2 Adequacy of Supporting Information

Comment: The ASARCO Multi-State Environmental Custodial Trust (The Trust) commented that additional supporting information for the HRS package should be considered for inclusion. The Trust specifically commented that while some studies conducted by the Trust through 2016 were included as references to the HRS documentation record at proposal, key recent studies, including an Operation and Maintenance Plan (included as Attachment 1 of the Trust's comment letter)[2] for the cover on the 10-acre parcel (Source 1), were not referenced and should be included. The Trust stated that the lack of this documentation results in misstatements of features of the Trust Property. The Trust also commented that a September 2019 Final Post-Closure Groundwater Sampling and Analysis Report and an April 2022 Technical Memorandum: Transducer Study of Surface Water and Groundwater Elevation should be included in the record (included as Attachments 2 and 3, respectively, of the Trust's comment letter).[3, 4]

Response: The documents and information made available to the public in the docket for the Site at the time of proposal provided the EPA's rationale for adding the Site to the NPL, and the documents and information provided in the HRS package for the Site were sufficient for the purposes of conducting an HRS evaluation for the Site and met all CERCLA and HRS requirements. This information was made available to the public, and it provided the public sufficient information to review the Site score and meaningfully comment on the proposed Site listing. Specifically, the information included in the docket at proposal was sufficient to characterize Source 1 for an HRS evaluation; the EPA did not rely on any information outside of the docket materials to support the HRS scoring of the Site.

The documents outlined by the Trust that were not included or referenced in the HRS documentation record at proposal, nor in the docket for the Site, were provided in the commenter's submission and are now included as part of the public docket for the Site because the commenter submitted them as attachments to its comments.

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[2] Attachment 1 of the Trust's comment letter: *Operation & Maintenance Plan, Former Federated Metals Site, Whiting, Indiana, Revision 4* (Ramboll US Corporation, August 2021).
[3] Attachment 2 of the Trust's comment letter: *Final Post-Closure Groundwater Sampling and Analysis Report, Former Federated Metals Site, Whiting, Indiana* (Ramboll US Corporation, September 2019).
[4] Attachment 3 of the Trust's comment letter: *Technical Memorandum: Transducer Study of Surface Water and Groundwater Elevations, Former Federated Metals Site, Whiting, Indiana (IND005444104)* (Ramboll US Consulting Inc., April 2022).

These documents are in the online docket at Regulations.gov. Further, as shown in the HRS documentation record at proposal and in sections 3.7, Containment – Source 1, and 3.9, Ground Water to Surface Water Component, of this support document, the additional information pointed to by the commenter does not impact the HRS scoring or the evaluation of the Site. Thus, the EPA has determined that these additional documents are not necessary to support the HRS documentation record at proposal scoring.

Regarding the Trust's comments on the inclusion of a reference citation to the Operation and Maintenance Plan for Source 1, the EPA has reviewed and considered the information in the attachment and determined that this does not impact the HRS score or evaluation. Please see section 3.7, Containment – Source 1, of this support document, for a detailed explanation of the containment features as applicable to an HRS evaluation.

Regarding Attachments 2 and 3 submitted by the Trust, the comments submitted by the Trust did not point to specific issues in the attachments that would impact the HRS site score. These attachments submitted by the Trust do not automatically put the EPA on notice of all the commenters' reasons for why the Site should not be on the NPL. As the court explained in Northside Sanitary Landfill, Inc. v. Thomas, 849 F.2d 1516, 1520 (D.C. Cir. 1988), the "dialogue between administrative agencies and the public is a two-way street." A commenter "cannot merely state that a particular mistake was made," rather "it must show why the mistake was of possible significance in the results the agency reaches." Id. at 1519. Here, the commenter has not raised any specific issues that would impact the HRS site score based on information found in those documents, and the Trust has not explained how the documents impact the HRS score or the decision to list the Site on the NPL. As stated by the court in the Northside case, "the mere submission of voluminous documentation to the EPA is not enough to put the EPA on notice of all possible reasons why a site should not have been included on the NPL." Id.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.3 Liability

Comment: The Trust commented that it has installed an engineered cap on Source 1 that is operating as designed and being maintained in compliance with an EPA approved plan. As this engineered cap is operating as designed, the Trust asserts that no supplemental corrective actions would be needed for Source 1. The Trust commented that its obligations and liabilities are controlled by the terms of the Settlement Agreement and that its obligations are limited to the Trust Property and any migration of hazardous substances from the Trust Property.

Response: In as much as this comment concerns liability for the contamination on Source 1 and/or other contamination associated with the Site, liability is not considered in evaluating a site under the HRS. The NPL serves primarily as an informational tool for use by the EPA in identifying those sites that appear to present a significant risk to public health or the environment. Listing a site on the NPL does not reflect a judgment on the activities of the owner(s) or operator(s) of a site. It does not require those persons to undertake any action, nor does it assign any liability to any person. This position, stated in the legislative history of CERCLA, has been explained more fully in the Federal Register (48 FR 40674, September 8, 1983, and 53 FR 23988, June 24, 1988). See Kent County v. EPA, 963 F.2d 391 (D.C. Cir. 1992). Additionally, settlement agreements, either attendant upon or separate from liability determinations, are likewise not considered when evaluating a site under the HRS and are not conducted as part of NPL listing.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.4 Current Conditions

Comment: The Trust commented that the HRS documentation record at proposal did not accurately describe the current conditions of Source 1.

In particular, the Trust pointed to language on page 33-34 of the HRS documentation record at proposal that states:

> In addition, SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system. Currently a vegetative cover is being maintained over SWMU #1 (Source #1) (Ref. 108, pgs. 1, 2)….
>
> SWMU #1 is currently vegetated. Any development of rills and/or gullies in the cover material could expose the underlying hazardous materials. Since there is no functioning and maintained run-on control system and runoff management system as previously stated, hazardous materials could enter into Lake George via overland flow (Ref. 108, pg. 1).

The Trust asserted these statements do not acknowledge that a 10-acre engineered cap was completed in 2005 pursuant to the RCRA Corrective Action process and added that the engineered cap is being maintained according to an EPA approved Operation and Maintenance Plan (O&M plan). The Trust stated:

> The O&M plan details the presence and management of run on and runoff controls of Source #1/SWMU #1 via the 10-acre engineered cap. Specifically, as noted in the O&M plan, excess stormwater on the engineered cap is directed to two drainage swales that discharge to the northwest to Lake George (at the northwest corner of the cap), and to the south toward the Sedge Meadow (in the eastern section of the cap).

The Trust then quoted a 2017 EPA assessment of the cap as stating:

> Region 5's analysis of the data from the Site, including the results of the 2016 Hydrogeological Supplemental Investigation Report, indicate that the landfill cover, as currently configured and vegetated, is operating as designed and thus is mitigating aqueous infiltration through the waste and reducing pollutant loadings to groundwater under the landfill. Accordingly, the Region has determined that the site remedy has been constructed meeting the 'CA550RC Remedy Constructed' RCRA Corrective Action definition for the facility. Should the future groundwater sampling indicate the need to supplement the existing corrective action structures at the facility, the CA550RC determination would be reassessed.

The Trust asserted it is in compliance with the O&M plan and is not aware of any groundwater data that would suggest additional corrective actions are needed on the Source 1 cap.

The Trust noted that maintenance of cap swales was performed in 2019 as documented in the Attachment 1 of the O&M plan (pointing out that the plan also includes management practices, action procedures for maintenance, and notification procedures). Therefore, the Trust stated that "Source #1/SWMU #1 does contain a run on and runoff control system (i.e., the engineered cap) that is operating as designed and that is being maintained by the Trust in compliance with an US EPA approved O&M Plan."

Response: The information presented in the HRS documentation record at proposal with respect to Source 1 and the cap are accurate and sufficiently detailed for the purpose of the HRS evaluation. The EPA has determined that addressing the Site under CERCLA is appropriate, and listing the Site on the NPL is the next appropriate step in the Superfund process. Prior response actions have been considered, and the current conditions at the Site warrant placement on the NPL as evidenced by the Site achieving an HRS site score above the 28.50 listing threshold. Specific technical HRS scoring considerations for Source 1 containment are addressed in section 3.7, Containment – Source 1, of this support document. However, contamination associated with Sources 1 and 2, including contamination already released to Lake George and wetlands (as detected in observed release sediment samples), and to the 168 properties that are evaluated as being currently subject to Level I (arsenic) and Level II

(arsenic and lead) contamination (and 29 additional workers) in Hammond and Whiting, Indiana make this Site eligible for placement on the NPL.

The HRS documentation record at proposal does acknowledge the cap, and it describes the cap in several instances. Relevant to HRS scoring considerations, the HRS documentation record at proposal also notes 1) that contamination has already been released to surface water and remains in surface water, 2) that while the cap limits migration of contamination from Source 1 to surface water, it does not eliminate such migration, and 3) that, for HRS purposes, Source 1 does not have a functioning and maintained run-on control system and runoff management system nor a liner with functioning leachate collection and removal system.

The HRS documentation record at proposal includes, on pages 33-34, descriptions of the cap (including the language quoted by the commenters), descriptions of historical releases of contamination to surface water that were partially cleaned up via dredging, as well as descriptions of related contamination that remains in the lake:

> Two feet of soil material and a phytoremediation cap was constructed for SWMU #1 in December 2005. There is no liner with functioning leachate collection and removal system immediately above a liner. In addition, SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system. Currently a vegetative cover is being maintained over SWMU #1 (Source #1) (Ref. 108, pgs. 1, 2)….
>
> Sediment sampling in Lake George conducted for the RCRA Facility Investigation (RFI) suggested elevated levels of contaminants (Ref. 38, pg. 21). Historically, overland flow from SWMU #1 (Source #1) had discharge directly into Lake George as evidenced by materials at SWMU #1 (Source #1) that had encroached into the lake and sedge meadow. Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to SWMU #1where they could be confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). The sedge meadow is a wetland located on the south side of SWMU #1 (Source #1) (Ref. 27, pg. 38). Only a 100-foot area of Lake George was dredged and deposited into SWMU #1 (Source #1). Approximately 7,403 cubic yards of impacted material was removed from Lake George (Refs. 27, pgs. 17, 38; 38, pg. 61 shows area that was dredged). Approximately 4,188 cubic yards of impacted material was removed from the sedge meadow (Ref. 27, pg.17)….
>
> Although, RCRA Corrective Action activities were conducted for Source #1 (SWMU #1), additional sediment sampling of Lake George by IDEM during the ESI, revealed that high levels of lead are still present in Lake George and within surrounding wetlands (Ref. 5, pg. 49; Tables 15, 16, 19, and 20 of this HRS documentation record).
>
> Since a cover material has been placed over the buried piles and no liner is present, the historic probable points of entry (PPE) for contamination of the surface water pathway occurred along the entire southern perimeter of the former Federated Metals property where contaminated dredged material from Lake George was deposited in SWMU #1 (Source #1) (Ref. 108, pg. 1, 2; Table 4 and Figures 2 and 6 of this HRS documentation record).
>
> SWMU #1 is currently vegetated. Any development of rills and/or gullies in the cover material could expose the underlying hazardous materials. Since there is no functioning and maintained run-on control system and runoff management system as previously stated, hazardous materials could enter into Lake George via overland flow (Ref. 108, pg. 1).

Page 42 of the HRS documentation record at proposal includes that:

> Because materials at SWMU #1 (Source #1) encroached into the lake, Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to the landfill where they were confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). Only a 100-foot area of Lake George was dredged and deposited into SWMU #1 (Source #1) (Refs. 27, pgs. 17, 38; 38, pg. 61).

Similar information is presented on page 43 of the HRS documentation record at proposal:

> SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system or a liner with functioning leachate collection and removal system immediately above liner. A value of 9 is assigned (Ref. 1, Table 4-2; 108, pgs. 1, 2).
>
> It should be noted that materials at the RCRA SWMU #1 (Source #1) encroached into Lake George and a sedge meadow (Ref. 38, pg. 21; 101, pg. 20). Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to the SWMU #1 (Source #1) where they were confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). Only a 100-foot area of Lake George directly adjacent to SWMU #1 (Source #1) was dredged and deposited into SWMU #1(Source #1) (Refs. 27, pgs. 17, 38; 38, pg. 61).
>
> However, lake sediments and wetlands are still contaminated beyond the 100-foot dredged area as indicated by Lake George sediment samples (Table 16 of this documentation record, Refs. 27, pg. 17; 38, pg. 61).

Cited Reference 108 includes statements from an EPA corrective action project manager saying that "SWMU #1 does not have a functioning and maintained run-on control system and runoff management system."

Thus, although the Trust asserts that directing excess stormwater on the cap to the drainage swales represents a functioning and maintained run-on control system and runoff management system, this is not the case for HRS purposes. For further discussion of the overland flow path and PPEs to surface water, please refer to section 3.8, Overland Flow and Probable Points of Entry, of this Support Document.

The Trust notes that the cap is in compliance with the O&M plan, and the Trust also stated that it has made repairs to the swales to remain in compliance with the O&M plan. The EPA acknowledges these actions and the current status of the cover on Source 1.

However, the EPA notes that, as constructed, damage to the vegetative soil cover is known to occur and is further documented in the attachments submitted by the Trust (see pages 8, 18, 27-29, of Attachment 1 of the Trust's comment letter: *Operation & Maintenance Plan, Former Federated Metals Site, Whiting, Indiana, Revision 4*), which allows for preferential water infiltration through the cover and into the hazardous waste below the cap. Additionally, even under ideal/designed conditions, the Trust acknowledges in its comments that infiltration through the cap is only reduced and not eliminated[5]. Therefore, because rills and/or gullies in the cover material could expose the underlying hazardous materials and hazardous substances could still leave the source and enter surface water, the EPA properly evaluated the current conditions of Source 1 in the HRS documentation record at proposal.

[5] The Trust has referenced in its comments a 2017 EPA assessment of the cap as stating: "…as currently configured and vegetated, is operating as designed and thus is **mitigating** aqueous infiltration through the waste and **reducing** pollutant loadings to groundwater under the landfill." [emphasis added]

Regarding any technical or scoring aspects of these comments on the HRS site evaluation, please see section 3.7, Containment – Source 1, of this support document, for a full discussion of the containment factor value assignment and the eligibility of the Source 1 in the HRS evaluation.

Finally, EPA notes that all Site investigation work, as well as any remediation undertaken by Potentially Responsible Parties (PRPs) performed to date and that which is currently proceeding will be considered in evaluation of the Site for the purposes of future response actions.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.5 Risk to Human Health or the Environment

Comment: The Trust submitted comments related to whether ongoing risk to the environment from Source 1 has been mitigated. The Trust commented that the engineered cap was constructed in 2005 and is being properly maintained according to an EPA approved O&M plan. In discussing the possibly movement of contamination from Source 1 to Lake George via groundwater, the Trust commented that the 10-acre engineered cap on Source 1 effectively mitigates aqueous infiltration and pollutant loading to Lake George, and therefore, Source 1 does not pose a related risk of contaminant migration to Lake George. The Trust commented that in addition to the engineered cap mitigating infiltration, the September 2019 Final Post-Closure Groundwater Sampling and Analysis Report (Attachment 2 of the Trust's comment letter) and the 2022 Transducer Study (Attachment 3 of the Trust's comment letter) show that the groundwater beneath the cap generally flows away from Lake George further mitigating the risk at the Site.

Response: Regarding questions of ongoing risk or the level of risk posed by the Site, placing a site on the NPL is not based on a site-specific risk assessment. The HRS documentation record at proposal establishes that the Site poses a sufficient relative risk to human health or the environment as compared to other candidate sites evaluated using the HRS to warrant inclusion on the NPL and further investigation. Consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), the Site has been placed on the NPL based on an HRS evaluation of the relative risk posed by: hazardous substances arsenic and lead in scored sources; lead contamination in sediment samples significantly above background levels in both Lake George and adjacent wetlands (and presence of habitat known to be used by the Trumpeter Swan); and arsenic- and lead-contaminated soil significantly above background levels on properties located in Hammond and Whiting, Indiana (and the presence of associated residential population).

The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation to assess the nature and extent of public health and environmental risks associated with a release of hazardous substances, pollutants or contaminants. See 88 FR 18499 (Proposed Rule, Federated Metals Corp Whiting, March 29, 2023); see also 55 FR 51532 (Final Rule, Hazard Ranking System, December 14, 1990) and 82 FR 2760 (Addition of Subsurface Intrusion Component to the Hazard Ranking System, January 9, 2017). CERCLA § 105(a)(8)(a) requires the EPA to determine NPL priorities among sites based on the "relative risk or danger to public health or welfare, or the environment." The criteria the EPA applies to determine this relative risk or danger is codified in the HRS, and is the Agency's primary tool for deriving a site score based on the factors identified in CERCLA. The HRS evaluation and Site score above 28.50 represents the EPA's determination that the Site may pose a relative risk or threat to human health and the environment and warrants further investigation under CERCLA. As part of the standard Superfund process, once the Site is on the NPL, the investigations performed to date to characterize the Site will be evaluated for completeness, further information will be collected if deemed necessary to adequately characterize the risks posed by the Site, and based on this information, a risk assessment decision will be made determining what, if any, remedial action is necessary to protect human health and the environment.

Regarding comments concerning additional risk from ongoing contamination to the lake from Source 1, as stated above, the Site evaluation was based on arsenic and lead contamination at sources, lake and wetland sediments,

and residential properties; in particular, the HRS evaluation assessed the migration of contamination from sources to surface water via overland flow/flood. Contamination from site sources, including Source 1, has already entered Lake George and wetlands. Whether additional contamination from Source 1 is continuing to migrate to Lake George and pose further risk is not specifically considered in the HRS Site score. The HRS source containment factor value does generally consider if source contaminants could leave the source and enter the pathway medium. Source 1 was appropriately assigned an overland/flood containment factor greater than zero, implying imperfect containment of releases from Source 1 to surface water via overland migration. (See section 3.7, Containment – Source 1, of this support document for further discussion of the HRS containment factor.) Also, again, in this case contamination has already entered the surface water pathway. The ability of contamination to migrate from Source 1 to Lake George via groundwater—including related aspects like mitigation efforts and groundwater flow direction—does not impact the HRS site score for the Site as evaluated. (See section 3.9, Groundwater to Surface Water Component, of this support document for further discussion regarding how the HRS deals with overland migration and groundwater migration to surface water separately.)

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.6 Impact of Contamination/Stigma of Listing

Comment: An anonymous commenter expressed displeasure on learning of the contamination associated with the site and stated: "Mayor McDermott please don't allow this! You are working too hard to make Hammond better and prettier! This will ruin it!"

Response: The commenter appears to be concerned about NPL listing effects on Hammond (versus the effect of the contamination on Hammond). Negative impacts associated with listing the Site, if any, would be engendered by the contamination in the area, not by placing the Site on the NPL. Additionally, factors of public perception are generally not considered in the assessment of whether a site belongs on the NPL (see Section 105(a)(8)(A) of CERCLA). Inclusion of a site or facility on the NPL does not in itself reflect a judgment on the activities of the owner(s) or operator(s), but rather reflects the Agency's judgment that a significant release or threat of release has occurred and that the site is a priority for further investigation under CERCLA.

There are both costs and benefits that can be associated with listing a site to the NPL. Among the benefits are increased health and environmental protection as a result of increased public awareness of potential hazards. In addition to the potential for Federally financed remedial actions, the addition of a site to the NPL could accelerate privately financed, voluntary cleanup efforts. Listing sites as national priority targets also may give States increased support for funding responses at particular sites. As a result of the additional CERCLA remedies, there will be lower human exposure to high-risk chemicals, and higher quality surface water, groundwater, soil, and air. Therefore, it is possible that any perceived or actual negative fluctuations in property values, development opportunities, or stigma associated with listing the Site to the NPL due to contamination may also be countered by positive fluctuations when a CERCLA investigation and any necessary cleanup are completed.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.7 Containment – Source 1

Comment: The Trust asserted that the description of Source 1 characteristics related to containment in the HRS documentation record at proposal does not fully acknowledge aspects of the engineered soil cap constructed in 2005. The Trust pointed to language on pages 33-34 of the HRS documentation record at proposal that states:

> In addition, SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system. Currently a vegetative cover is being maintained over SWMU #1 (Source #1) (Ref. 108, pgs. 1, 2)….

> SWMU #1 is currently vegetated. Any development of rills and/or gullies in the cover material could expose the underlying hazardous materials. Since there is no functioning and maintained run-on control system and runoff management system as previously stated, hazardous materials could enter into Lake George via overland flow (Ref. 108, pg. 1).

The Trust commented that a 10-acre engineered cap (containing a run on and runoff control system) was completed on Source 1 pursuant to the RCRA Corrective Action process and added that the engineered cap is operating as designed and being maintained according to an EPA approved Operation and Maintenance Plan (O&M plan).

The Trust stated:

> The O&M plan details the presence and management of run on and runoff controls of Source #1/SWMU #1 via the 10-acre engineered cap. Specifically, as noted in the O&M plan, excess stormwater on the engineered cap is directed to two drainage swales that discharge to the northwest to Lake George (at the northwest corner of the cap), and to the south toward the Sedge Meadow (in the eastern section of the cap).

The Trust then quoted a 2017 EPA assessment of the cap as stating:

> Region 5's analysis of the data from the Site, including the results of the 2016 Hydrogeological Supplemental Investigation Report, indicate that the landfill cover, as currently configured and vegetated, is operating as designed and thus is mitigating aqueous infiltration through the waste and reducing pollutant loadings to groundwater under the landfill. Accordingly, the Region has determined that the site remedy has been constructed meeting the "CA550RC Remedy Constructed" RCRA Corrective Action definition for the facility. Should the future groundwater sampling indicate the need to supplement the existing corrective action structures at the facility, the CA550RC determination would be reassessed.

Further, the Trust asserted it is in compliance with the EPA-approved O&M plan and is not aware of any other groundwater data that would suggest additional corrective actions to the engineered cap. The Trust noted that maintenance of cap swales was performed in 2019, as documented in the Attachment 1 of the O&M plan (pointing out that the plan also includes management practices, action procedures for maintenance, and notification procedures). Therefore, the Trust stated that "Source #1/SWMU #1 does contain a run on and runoff control system (i.e., the engineered cap) that is operating as designed and that is being maintained by the Trust in compliance with an US EPA approved O&M Plan."

Response: Insomuch as these comments call into question the Source 1 containment features description and resulting assigned HRS source containment factor value, the associated descriptions and factor value are consistent with site conditions and with HRS Sections 2.2.3, *Identify hazardous substances available to a pathway*, 4.1.2.1.2.1.1, *Containment*, and HRS Table 4-2, *Containment factor values for surface water migration pathway*. Consistent with HRS Table 4-2, a source containment factor value greater than zero was assigned to Source 1 indicating the hazardous substances associated are available to migrate to surface water for HRS purposes. As directed in HRS Sections 4.1.2.1.2.1.1 for the surface water overland flow component, conditions at Source 1 were compared to containment criteria in HRS Table 4-2 for the surface water overland flow component of the surface water migration pathway. The source conditions allowed a source containment factor value of 9 to be assigned to Source 1 because even though Source 1 has a Phyto cap, it does not have a functioning and maintained run-on control system and runoff management system.

HRS Section, 2.2.3 *Identify hazardous substances available to a pathway*, in relevant part states to consider the following:

In evaluating each migration pathway, consider the following hazardous substances available to migrate from the sources at the site to the pathway: …

- Surface water migration-overland/flood component.
  - Hazardous substances that meet the criteria for an observed release to surface water in the watershed being evaluated.
  - All hazardous substances associated with a source with a surface water containment factor value greater than 0 for the watershed (see sections 4.1.2.1.2.1.1 and 4.1.2.1.2.2.1).

HRS Section 4.1.2.1.2.1.1, *Containment*, provides the requirements for evaluating the source containment factor value for the surface water migration pathway overland/flood migration component. For a source not located in surface water, HRS Section 4.1.2.1.2.1.1, *Containment*, in part, states:

Determine the containment factor value for the watershed as follows: …

- If none of the sources is located in surface water in the watershed, assign a containment factor value from table 4–2 to each source at the site that can potentially release hazardous substances to the hazardous substance migration path for this watershed.

HRS Table 4-2 provides the requirements to assign sources a containment factor value based on their source type. For HRS purposes, Source 1 was identified as source type "Pile," and this source type is evaluated under the "All Sources (Except Surface Impoundments, Land Treatment, Containers, and Tanks)" category in HRS Table 4-2 which states in part:

TABLE 4–2— CONTAINMENT FACTOR VALUES FOR SURFACE WATER MIGRATION PATHWAY

Source	Assigned value
All Sources (Except Surface Impoundments, Land Treatment, Containers, and Tanks)	
Evidence of hazardous substance migration from source area (i.e., source area includes source and any associated containment structures)	10
No evidence of hazardous substance migration from source area *and*:	
(a) Neither of the following present: (1) maintained engineered cover, or (2) functioning and maintained run-on control system and runoff management system…….	10
(b) Any one of the two items in (a) present……...……	9
(c) Any two of the following present: (1) maintained engineered cover; or (2) functioning and maintained run-on control system and runoff management system, or (3) liner with functioning leachate collection and removal system immediately above liner. ……	7

Page 33 of the HRS documentation record at proposal provides a brief description of Source 1:

Source #1 is buried piles of waste material located around the western and southern portions of the former Federated Metals property. It should be noted that the RCRA Solid Waste Management Unit #1 (SWMU #1) area is referred to as a landfill in Corrective Measure reports (Refs. 27, pg. 8; 38, pg. 13; 84, pgs. 13, 34). Throughout Section 2.2.1 for Source #1, the SWMU #1, the landfill/CAMU, is Source #1.

> Two feet of soil material and a phytoremediation cap was constructed for SWMU #1 in December 2005. There is no liner with functioning leachate collection and removal system immediately above a liner. In addition, SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system. Currently a vegetative cover is being maintained over SWMU #1 (Source #1) (Ref. 108, pgs. 1, 2). RCRA SWMU #1 (Source #1) accepted much of the wastes generated at the facility. The following solid wastes were deposited in the landfill: blast furnace slag from cupola operations; zinc oxide fume from the brass and cupola operation; tin/lead fume; low tin slag; zinc hopper dust; zinc sludge; used firebrick; and lead base alloys, as well as material dredged from Lake George (Refs. 38, pgs. 13, 21; 89, pgs. 56, 57; 101, pg. 20). The primary hazardous substances associated with this generated waste is lead and arsenic (see Table 3 of this HRS documentation record).…
>
> Historically, overland flow from SWMU #1 (Source #1) had discharge directly into Lake George as evidenced by materials at SWMU #1 (Source #1) that had encroached into the lake and sedge meadow. Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to SWMU #1 where they could be confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). The sedge meadow is a wetland located on the south side of SWMU #1 (Source #1) (Ref. 27, pg. 38). Only a 100-foot area of Lake George was dredged and deposited into SWMU #1 (Source #1).

Pages 42 to 43 of the HRS documentation record at proposal captures the information used to assign a source containment factor value for Source 1, explaining why the hazardous substances are available to migrate from Source 1 to surface water and why Source 1 is eligible for HRS scoring purposes. While other pages of the HRS documentation record at proposal, including pages 33-34 as noted by the Trust, captures source description information related to the source containment, pages 43-44 of the HRS documentation record at proposal summarizes the information and explains why the source is uncontained to prevent migration of hazardous substances to the surface water migration pathway and why a source containment factor value of 9 was assigned to Source 1. Page 42 of the HRS documentation record at proposal summarizes the hazardous substances available to the pathway descriptions, and it states:

> Lead and arsenic are hazardous substances available to the surface water pathway. As stated in 2.2.2 above, the RCRA SWMU #1 **(Source #1), accepted much of the wastes generated at the facility,** including the following solid wastes: blast furnace slag from cupola operations; zinc oxide fume from the brass and cupola operation; tin/lead fume; low tin slag; zinc hopper dust; zinc sludge; and used firebrick, as well as waste material dredged from Lake George (Refs. 38, pgs. 13, 21; 89, pgs. 56, 57; 101, pg. 20).
>
> Because materials at SWMU #1 **(Source #1) encroached into the lake**, Corrective Action Objectives for Lake George included bringing visible waste materials that **encroached into the lake and sedge meadow** back to the landfill where they were confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). Only a 100-foot area of Lake George was dredged and deposited into SWMU #1 (Source #1) (Refs. 27, pgs. 17, 38; 38, pg. 61). [emphasis added]

Page 43 of the HRS documentation record at proposal provides the source containment description for the overland/flood migration component, and it states:

Containment Description	Containment Factor Value	References
Release to ground water	NS	
Release via overland migration and/or flood: SWMU #1 (Source #1) does not have a functioning and maintained run-on control system and runoff management system or a liner with functioning leachate collection and removal system immediately above liner. A value of 9 is assigned (Ref. 1, Table 4-2; 108, pgs. 1, 2). It should be noted that materials at the RCRA SWMU #1 (Source #1) encroached into Lake George and a sedge meadow (Ref. 38, pg. 21; 101, pg. 20). Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to the SWMU #1 (Source #1) where they were confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). Only a 100-foot area of Lake George directly adjacent to SWMU #1 (Source #1) was dredged and deposited into SWMU #1(Source #1) (Refs. 27, pgs. 17, 38; 38, pg. 61). However, lake sediments and wetlands are still contaminated beyond the 100-foot dredged area as indicated by Lake George sediment samples (Table 16 of this documentation record, Refs. 27, pg. 17; 38, pg. 61).	9	Refs. 1, Table 4-2; 108, pgs. 1, 2

Notes:
NS – Not Scored

Reference 108 of the HRS documentation record at proposal cited above was prepared by the EPA Corrective Action Project Manager. It explains the source containment features at Source 1:

> (1) Maintained engineered cover
> A phytoremediation cap was constructed on SWMU #1 in December 2005. The purpose of the cap is to prevent direct contact with underlying smelter wastes and **to control surface water infiltration** through the waste. The cap is inspected on a semi-annual basis in accordance with an Operation and Maintenance Plan (Revision 4, August 2021).
>
> (2) Functioning and maintained run-on control system and runoff management system
> SWMU #1 **does not have a functioning and maintained run-on control system and runoff management system**.
>
> (3) Liner with functioning leachate collection and removal system immediately above liner.
> SWMU #1 **does not have a liner** with functioning leachate collection and removal system immediately above liner. [emphasis added]

Hence, Source 1 was found to be uncontained to prevent migration of hazardous substances to surface water. There are several factors supporting this finding. For example:

- For the source (and its hazardous substances, hazardous waste quantity, etc.) to be eligible for scoring in the surface water migration pathway overland/flood component, the containment factor value need only be greater than zero. A source containment factor value of 9 was assigned to Source 1.
- Although the Source 1 includes features that direct stormwater drainage to some extent, these do not constitute a functioning and maintained run-on control system and runoff management system as intended by the HRS.
- The cap consists of a Phyto cover consisting of a soil cover, trees and grasses. This Phyto cover is not an impenetrable barrier and rainfall on the source would flow over and also penetrate the cover. While the Phyto cover limits surface water infiltration, it does not prevent it.
- Source 1 does not have a liner with a functioning leachate collection and removal system immediately above the liner; that alone, irrespective of a run-on/run-off management system, allows a source containment factor value of greater than zero (i.e., 7) to be assigned to Source 1 per HRS Table 4-2 quoted above.
- Source 1 did not always contain a Phyto cover. The Phyto cover was added in 2005. Hence, waste containing hazardous substances were more readily available to migrate to surface water and did so as is evidenced by the waste that encroached into Lake George and the Sedge Meadow (wetland).
- By the Trust's own admission, flow across the source is mitigated but not fully inhibited—that is, excess stormwater is directed to two drainage swales that discharge to Lake George and the Sedge Meadow (wetland).
- In the O&M Plan (Attachment 1 of the Trust's commenter letter), the March 2019 inspection of the cap resulted in a number of deficiencies needing repair. This is summarized on page 2 of Appendix 1 (2020 Cap Maintenance Completion Report) of the O&M Plan, including recommendations to:
    - **Fill in Minor Erosion Rills:** Fill in minor erosion rills noted at the northern end of the cap with topsoil and bentonite to mitigate the potential for future channel/erosion development.
    - **Improve Swale Drainage:** Improve the northern swale and eastern swales situated along the Whiting Metals fenceline (two locations observed with minor water retention) by rough grading to promote the drainage to the riprap aprons that discharge to Lake George and the Sedge Meadow.
    - **Fix Fenceline Low Spots:** Fill in low areas beneath the southern fence line along Lake George to preclude animal passage from the lake area.
    - **Seed Repaired Areas:** Seed the filled holes and repair erosion rills with similar seed as the existing seed mix (specified in the 2002 Design Report), including limited watering if needed to establish vegetation (depending on rainfall conditions and observations from periodic follow-on visits).
    - **Improve Access Road with Gravel:** Replenish with gravel approximately 1,000 feet of the central access road extending westward from the Site entrance gate to the area of the MW-6 monitoring well cluster to provide a suitable access road for future sampling, inspection, maintenance activities.
    - **Inspect and Replenish Rip-Rap:** Inspect the rip-rap in the on-site drainage swales and along Lake George and replenish where necessary. [emphasis in original] (Page 2 of Appendix 1 in Attachment 1 of the Trust's comment letter)

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.8 Overland Flow and Probable Points of Entry

Comment: The Trust submitted comments related to whether the overland flow path for Source 1 and probable points of entry are accurately reported in the HRS documentation record at proposal. The Trust commented that the HRS documentation record at proposal misstates features on the Trust Property (Source 1) and notes that

excess stormwater on the engineered cap is directed to two drainage swales that discharge to Lake George (northwest corner of the cap) and to the Sedge Meadow (eastern section of the cap).

Response: Insomuch as these comments call into question the overland flow from Source 1 to surface water and probable points of entry (PPEs) to surface water, the description of the path that overland flow would take to enter surface water is correct in the HRS documentation record at proposal. Source 1 was found to be uncontained to prevent migration of hazardous substance from the source to surface water. See section 3.7, Containment-Source 1, of this support document. The HRS documentation record at proposal delineated a linear PPE to surface water into Lake George starting at the upper northwest corner of Source 1 down to the southeast section of Source 1. This PPE discharges into Lake George, which is directly adjacent to Source 1, and also discharges into the wetlands adjacent to the southeast section of Source 1, as exhibited on Figure 6 of the HRS documentation record at proposal. Further, by the Trust's own admittance, excess stormwater on the engineered cap is directed to two drainage swales that discharge to Lake George (at the northwest corner of the cap) and to the Sedge Meadow (wetlands) (at the eastern section of the cap); these discharges would also be considered part of the overland flow from Source 1 with PPEs into Lake George and the wetlands adjacent to Source 1.

HRS Section 4.1.1.1, *Definition of hazardous substance migration path for overland/flood migration component*, explains the probable point of entry from the source to surface water. It states:

> The hazardous substance migration path includes both the overland segment and the in-water segment that hazardous-substances would take as they migrate away from sources at the site:
> - Begin the overland segment at a source and proceed downgradient to the probable point of entry to surface water.
> - Begin the in-water segment at this probable point of entry.

Pages 99 to 100 of the HRS documentation record at proposal describe the overland flow and hazardous substance migration path from Source 1 to surface water:

> Lake George is located adjacent to the south/southwest of the former Federated Metals property.…
>
> The surface water pathway starts at the edge of the RCRA SWMU #1 (Source #1) which is the entire west and south portions of the former Federated Metals property. SWMU #1 (Source #1) is adjacent to Lake George and wetlands (Ref. 4, pg. 50; 38, pg. 21; Tables 15 and 19 of this documentation record; Figure 6 of this documentation record)….
>
> The Federated Metals property is adjacent to north basin of Lake George (Figures 1, 2, 3, 4, 5, and 6 of this HRS documentation record).…
>
> As stated in Sections 2.2.1, 4.1.2.1.1, and 4.1.4.2.2, Because materials on the west and south side of the former Federated Metals property, SWMU #1 (Source #1) had encroached into the lake and sedge meadow, RCRA Corrective Action objectives for Lake George included bringing visible waste materials that encroached into the lake and sedge meadow back to the landfill where they were confined under an engineered barrier (Ref. 38, pg. 21; 101, pg. 20). Only a 100-foot area of Lake George was dredged and deposited into SWMU #1. However, elevated levels of lead were detected in sediment sampling of Lake George indicating that hazardous substances still remain in Lake George (Ref. 27, pgs. 17, 38; Table 16 of this HRS documentation record).…
>
> Historical PPEs for contamination of the surface water pathway occur along the entire southern perimeter of the former Federated Metals property where contaminated dredged material from Lake George was deposited into SWMU #1 (Source #1). The PPE is zero (0) feet from the Source

> #1 into Lake George. The PPE from Source #1 into the wetlands on the east side of Lake George [PPE 2 on HRS documentation record Figure 6] is also 0 feet (Tables 16 and 20 and Figure 6 of this documentation record; Ref. 27, pg. 17; 38, pg. 61).

While the Trust has taken measures to limit overland flow from Source 1 to surface water, the historical and current discharges, including excess storm water discharges to Lake George and wetlands, represent eligible PPEs that hazardous substances may take to surface water. Information to date supporting the overland flow path and PPEs to surface water includes that:

- Source 1 abuts Lake George and the Sedge Meadow (wetland) and because this source is not adequately contained to prevent migration, the overland flow path would consist of flow across the source (i.e., an overland flow path from Source 1) to PPEs into Lake George and into the wetland.
- The PPEs from Source 1 to the surface water migration pathway are all along the edge of Source 1 where it is adjacent to Lake George and the Sedge Meadow (wetlands), and they represent the points at which the overland segment of the hazardous substance migration path intersects with surface water, both historically and currently.
- The cap consists of a Phyto cover consisting of appropriate soil cover, trees and grasses. This cap is not impermeable, and Source 1 is adjacent to Lake George and the Sedge Meadow (wetlands).
- By the Trust's own admittance, excess stormwater on the engineered cap is directed to two drainage swales that discharge to Lake George (at the northwest corner of the cap) and to the Sedge Meadow (at the eastern section of the cap). These discharges would also be considered part of the overland flow from Source 1 to PPEs into surface water.
- When determining the overland path and PPE to surface water, historical, as well as current, possible overland flow paths from Source 1 to Lake George are considered. For example:
  - Overland flow from SWMU #1 (Source #1) had discharged directly into Lake George as evidenced by materials from Source #1 that had encroached into the lake and Sedge Meadow (wetland).
  - Corrective Action Objectives for Lake George included bringing visible waste materials that encroached into the lake and Sedge Meadow back to Source 1 where they could later be confined under the cap.
  - The cap was constructed in 2005, and waste was placed in Source 1 for years without the cap.

Further, even if the EPA were to consider just the excess stormwater on Source 1 being directed to two drainage swales that discharge to Lake George (at the northwest corner of the cap) and to the Sedge Meadow (wetland) (at the eastern section of the cap) as stated in the Trust's comment letter, the site would still score sufficient for listing. That is, those two discharge points are PPEs from Source 1 to surface water. The discharge at the northwest corner of Source 1 into Lake George is part of the PPE denoted in the HRS documentation record at proposal; this location is part of the most upgradient section of the PPE as shown on Figure 6 of the HRS documentation record at proposal. The discharge into the Sedge Meadow (wetland) adjacent to the southeast corner of Source 1 is also part of the PPE denoted in the HRS documentation record at proposal; this location is part of the most downgradient section of the PPE as shown on Figure 6 of the HRS documentation record at proposal. The resulting in-water segments of the surface water migration pathway remain the same.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

3.9 Ground Water to Surface Water Component

Comment: The Trust took issue with an HRS documentation record statement discussing a threat to Lake George, asserting that the engineered cap is effectively mitigating the groundwater beneath Source 1 from migrating to the surface water in Lake George. Specifically, the Trust pointed to page 100 of the HRS documentation record at proposal and the statement that:

> The release of hazardous wastes at Federated Metals poses a significant threat to surface water in the area because the source of contamination lies adjacent to Lake George where sensitive environments, wetlands and a State-endangered Trumpeter Swan exists… Sampling by IDEM for the ESI confirmed the presence of high levels of lead in the sediments of Lake George and wetlands…

The Trust commented that the groundwater beneath the Trust Property (Source 1) has been studied for interactions with the shoreline/surface water in Lake George, and the studies have indicated the lack of a "significant threat" to Lake George. The Trust commented that these studies (Attachments 2 and 3 to the Trust's comment letter) show the cap is effectively mitigating infiltration through the waste (Source 1) and is "reducing the pollutant loading to the groundwater under the landfill."

The Trust commented that the groundwater flow direction beneath the Trust Property (Source 1) generally flows toward the northeast, away from Lake George. The Trust commented that groundwater studies (Attachments 2 and 3 to the Trust's comment letter), "on nearly all occasions," show groundwater flows away from Lake George to the northeast and indicate the lack of a "significant threat" to the lake. The Trust further commented that groundwater flow toward Lake Michigan to the northeast is consistent with regional groundwater flow.

Response: The type of contaminant migration discussed in these comments involves a different HRS component than that scored in the HRS documentation record at proposal. Such migration would be evaluated for HRS surface water migration pathway purposes via the groundwater to surface water component, whereas this Site was scored via the overland/flood component. Further, the statement in the HRS documentation record at proposal that the Trust is discussing pertains to the threat to Lake George via contaminant releases that have already occurred via the overland /flood component (not via groundwater transport).

HRS Section 4.0.1, *Migration components*, provides the direction to evaluating the components of this migration pathway. It states:

> Evaluate the surface water migration pathway based on two migration components:
>
> - Overland/flood migration to surface water (see section 4.1).
> - Ground water to surface water migration (see section 4.2).
>
> Evaluate each component based on the same three threats: drinking water threat, human food chain threat, and environmental threat.
>
> **Score one or both** components, considering their relative importance**. If only one component is scored, assign its score as the surface water migration pathway score**. If both components are scored, select the higher of the two scores and assign it-as the surface water migration pathway score.

HRS Section 4.3, *Calculation of the surface water migration pathway score,* reiterates:

> Determine the surface water migration pathway score as follows:
>
> - If only one of the two surface water migration components overland/flood or ground water to surface water) is scored, assign the score of that component as the surface water migration pathway score.
> - If both components are scored, select the higher of the two component scores from sections 4.1.6 and 4.2.6. Assign that score as the surface water migration pathway score.

Pages 3 to 5 of the HRS documentation record at proposal present Table 4-1 of the HRS, the Surface Water Overland/Flood Migration Component Scoresheet. This indicated that this component is scored for the surface water migration pathway at this Site. The ground water to surface water migration component scoresheet was not presented meaning that this component was not evaluated, nor was it required. According to HRS section 4.0.1 cited above, "one or both components, considering their relative importance" may be evaluated. As the ground water to surface water migration component was not scored, information related to that component has no impact on the HRS score or site listing decision. Even if the EPA were to evaluate the ground water to surface water component, the HRS allows for only one of the two components (the higher scoring of the two, as cited above) to be assigned as the surface water migration pathway score (see HRS Sections 4.0.1, *Migration components*, and 4.3, *Calculation of surface water migration pathway score*).

Regarding the migration of contaminants from Source 1, as discussed in section 3.7, Containment – Source 1, of this support document, Source 1 was inadequately contained to prevent migration of hazardous substances to surface water, and this makes it eligible for scoring.

Further, the statement on page 100 of the HRS documentation record at proposal that the Trust is discussing pertains to the threat to Lake George via contaminant releases from the Site (including the scored sources) that have already occurred via the overland /flood component in addition to those that may occur in the future. The threat from Site releases is also discussed within the context of scoring migration of contaminants overland, not via groundwater to surface water. An observed release of hazardous substances in the surface water migration pathway was documented, a factor that the Trust did not dispute, and the resulting surface water migration pathway score and soil exposure component score of the soil exposure and subsurface intrusion pathway were sufficient to score the site for listing. With specific regard to the surface water migration pathway, on pages 101 to 114 of the HRS documentation record at proposal, an observed release of hazardous substances to Lake George and the wetlands have been documented where sensitive environments, wetlands and a State-endangered Trumpeter Swan, exist; this documentation was sufficient to maximize the score of the environmental threat of the overland/flood migration component of the surface water migration pathway. (See pages 3 to 5 of the HRS documentation record at proposal.)

While the ground water to surface water component was not scored, by the Trust's own admittance, the cap is "reducing" the pollutant loading, not eliminating it. However, the EPA will consider the Trust's comments and the findings in the 2022 Transducer study such as groundwater elevations, groundwater flow direction, surface water flow, and effects of precipitation events (i.e., impacts on the relationship between groundwater elevations in Source 1 relative to the surface water levels in Lake George), at later stages of the NPL process (see Attachment 3 of the Trust's comment letter).

Further, regarding groundwater flow direction to the northeast, because neither the groundwater to surface water component of surface water pathway nor the ground water migration pathway were scored at the Site, groundwater flow direction was not relevant to the listing but will be considered, if necessary, at later stages of the NPL process. The HRS does not require scoring all four pathways or all HRS pathway components if scoring those pathways/components does not change the listing decision. For some sites, data for scoring a pathway or a component are unavailable and obtaining these data would be time-consuming or costly. In other cases, data for scoring some pathways or components are available, but would only have a minimal effect on the site score. In still other cases, data on other pathways could substantially add to a site score but would not affect the listing decision. The HRS is a screening model that uses limited resources to determine whether a site should be placed on the NPL for possible Superfund response. A subsequent stage of the Superfund process, the remedial investigation (RI), characterizes conditions and hazards at the site more comprehensively.

This comment results in no change to the HRS score and no change in the decision to place the Site on the NPL.

4. Conclusion

The original HRS score for this site was 51.14. Based on the above responses to public comments, the score remains unchanged. The final scores for the Federated Metals Corp Whiting site are:

Ground Water:	Not Scored
Surface Water:	60.00
Soil Exposure and Subsurface Intrusion:	82.84
Air Pathway:	Not Scored
HRS Score:	51.14